

PROJECT DESCRIPTION
GENERAL

THIS PROJECT INVOLVES THE MODIFICATION OF AN EXISTING TRAFFIC SIGNAL AT THE INTERSECTION OF MD 104 (WATERLOO ROAD)/ SOUTH HAVEN DRIVE AT MD 103 (MONTGOMERY ROAD) FOR THE WORTHINGTON AREA VEHICULAR ACCESS IN HOWARD COUNTY. THE MODIFICATION INVOLVES ADDING ALTERNATE COUNTDOWN PEDESTRIAN SIGNALS AND ACCESSIBLE PEDESTRIAN SIGNALS (APS) FOR THE WEST LEG CROSSING OF MD 103 (MONTGOMERY ROAD). THE SIDE STREET PRESENCE LOOP FOR SOUTH HAVEN DRIVE SHALL BE ABANDONED AND NEW OVERHEAD VIDEO DETECTION CAMERA SHALL BE INSTALLED FOR ACTUATION OF THE NEW LEFT TURN AND THRU MOVEMENTS.

INTERSECTION OPERATION

USE EXISTING CONTROLLER HOUSED IN A BASE MOUNTED CABINET AT THIS LOCATION. THE INTERSECTION OPERATES IN A FULLY ACTUATED MODE USING 5 NEMA PHASES. A MODIFICATION TO THE GEOMETRIC WIDENING ON THE NORTH SIDE OF THE INTERSECTION FOR NEW HAVEN DRIVE SHALL OCCUR. NEW LED COUNTDOWN PEDESTRIAN SIGNAL HEADS WITH APS SHALL BE INSTALLED FOR THE WEST LEG CROSSING OF MD 103 (MONTGOMERY ROAD) AND A VIDEO DETECTION CAMERA SHALL BE INSTALLED FOR PRESENCE DETECTION FOR THE SIDE STREET OF SOUTH HAVEN DRIVE.

SPECIAL NOTES

1. THE FOLLOWING CONTACT PERSONS FOR THIS PROJECT ARE AS FOLLOWS:

PROJECT CONTACTS:
MR. JOHN CANNON, ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (301) 624-8141
MR. ERIC ECKHARDT, ASSISTANT DISTRICT ENGINEER - CONSTRUCTION
PHONE: (301) 624-8200/8201
MR. RAYMOND F. JOHNSON, ASSISTANT DISTRICT ENGINEER - MAINTENANCE
PHONE: (301) 624-8105/6
MRS. ANDREA ABEND, DISTRICT UTILITIES ENGINEER
PHONE: (301) 624-8115/6
MR. ROBERT SNYDER, ASSISTANT DIVISION CHIEF OF TRAFFIC OPERATIONS DIVISION - TELEPHONE DROP
PHONE: (410) 781-7631
OFFICE OF TRAFFIC AND SAFETY
MR. RICHARD L. DAFF, SR. CHIEF, TRAFFIC OPERATIONS DIVISION
PHONE: (410) 787-7630
MR. ED RODENHIZER (SIGN OPERATIONS)
PHONE: (410)-787-7658
MR SONNY BAILEY (SIGN OPERATIONS)
PHONE: (410)-7877670

EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY THE ADMINISTRATION.

CATEGORY CODE NO.	DESCRIPTION	UNITS	QUANTITY
900000	VIDEO DETECTION INTERFACE EQUIPMENT: 1-4 CAMERAS	EA	1
973023	SHEET ALUMINUM SIGNS	SF	38
	R3-5(L)(30"x36") SPAN WIRE MOUNTED	EA	1
	R10-4(1) (9"x12") POLE MOUNTED	EA	2
	W11-2 (36"x36") GROUND MOUNTED	EA	2
	W16-7P (24"x30") GROUND MOUNTED	EA	2

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

CATEGORY CODE NO.	DESCRIPTION	UNITS	QUANTITY
203030	TEST PIT EXCAVATION	CY	1
585405	5 INCH HEAT APPL. WHITE PERMANENT PREFORMED THERMO. PAVEMENT MARKING	LF	75
585620	12 INCH HEAT APPL. WHITE PERMANENT PREFORMED THERMO. PAVEMENT MARKING	LF	145
585654	24 INCH HEAT APPL. WHITE PERMANENT PREFORMED THERMO. PAVEMENT MARKING	LF	45
585462	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS ANY WIDTH	LF	170
600000	REMOVAL OF EXISTING CONCRETE	SF	175
655104	4 INCH CONCRETE SIDEWALK	SF	230
655120	DETECTABLE WARNING SURFACE FOR CURB RAMPS	LS	32
800000	REMOVE AND DISPOSE OF EXISTING EQUIPMENT	EA	1
800000	NAVIGATOR AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION & SIGN	EA	2
800000	16 INCH PEDESTRIAN LED COUNTDOWN SIGNAL HEAD SECTION - POLE MOUNT	EA	2
800000	NAVIGATOR 2 WIRE CENTRAL CONTROL UNIT	EA	1
800000	CONTROL CABLE, 100 FOOT VIDEO DETECTION CAMERA TO CONTROLLER	EA	1
801004	CONCRETE FOR SIGNAL FOUNDATION	CY	2
802501	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	LF	125
805118	4 INCH SCHED. 80 PVC CONDUIT-BORED	LF	70
805135	3 INCH SCHED. 80 PVC CONDUIT-TRENCHED	LF	35
811001	FURNISH AND INSTALL ELECTRICAL HANDHOLE	EA	1
813014	INSTALL GROUND MOUNTED SIGN	SF	28
813015	INSTALL OVERHEAD SIGN	SF	10
816001	VIDEO DETECTION CAMERA	EA	1
818004	10 FOOT BREAKAWAY PEDESTAL POLE	EA	2
837001	GROUND ROD - 3/4 INCH DIA. X 10 FOOT LENGTH	EA	2
860292	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE	EA	1
861105	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)	LF	470
861107	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	LF	440

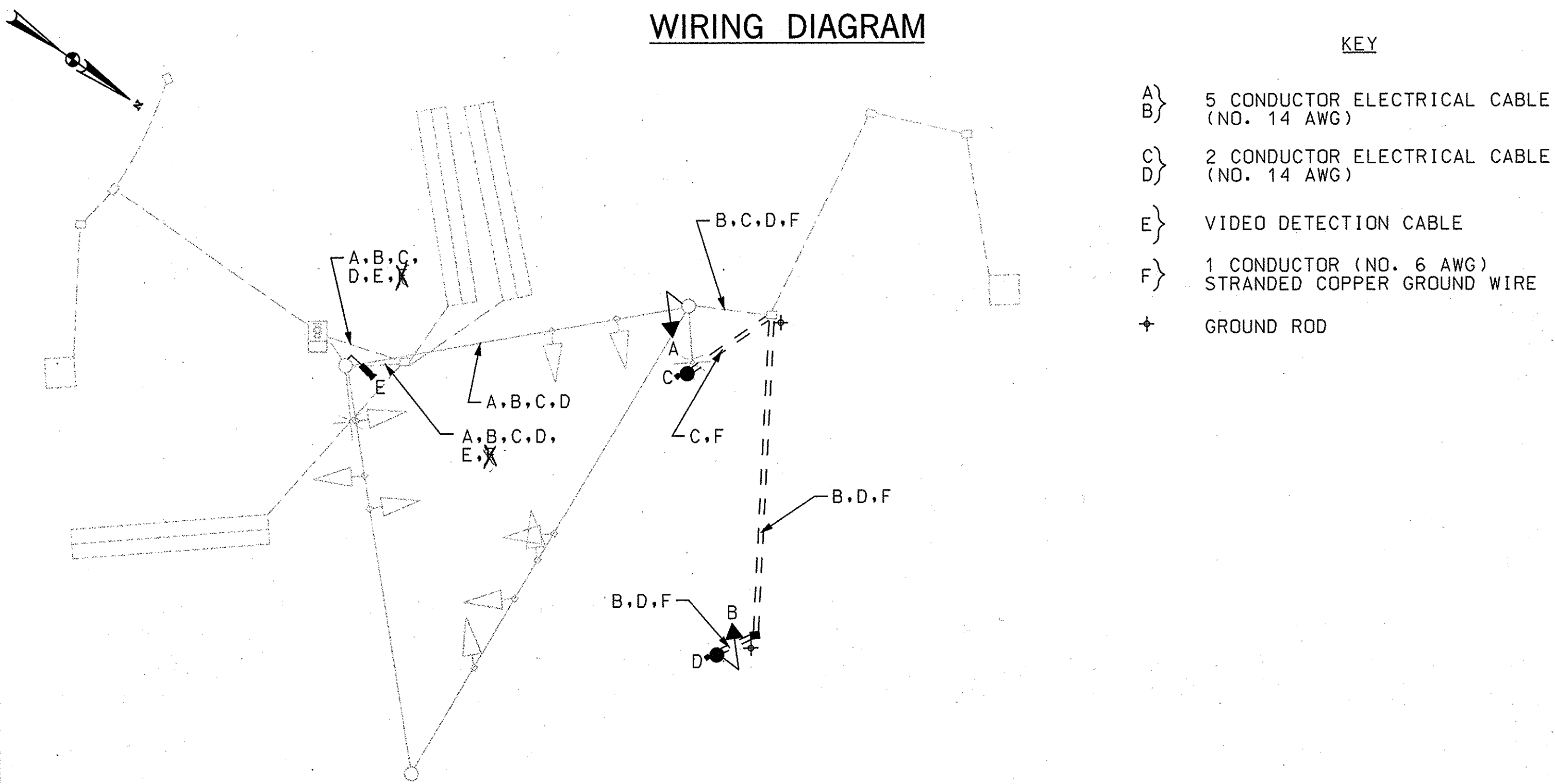
NOTE:

THE CONTRACTOR SHALL DELIVER APS UNIT TO SHA SIGNAL SHOP, PRIOR TO LOCATION INSTALLATION, FOR PROGRAMMING. SHA FORCES SHALL INSTALL CENTRAL CONTROL UNIT IN THE CABINET.

C. SHA FORCES SHALL REMOVE THE CONTROLLER AND ALL AUXILLIARY EQUIPMENT FROM THE CONTROLLER CABINET. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

CATEGORY CODE NO.	DESCRIPTION	UNITS	QUANTITY
	NONE		

WIRING DIAGRAM



PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11
	(R)	(R)	(Y)	(R)	(R)	(R)	(R)	(R)	(R)	(X)	(X)
	(Y)	(Y)	(G)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(X)	(X)
	(G)	(G)	(G)	(G)	(G)	(G)	(G)	(G)	(G)		
PHASE 1 AND 6	R	R	+GG	+GG	G	R	R	R	R	DW	DW
1 AND 6 CHANGE	R	R	+YG	+YG	G	R	R	R	R	DW	DW
PHASE 2 AND 6	G	G	G	G	G	R	R	R	R	DW	DW
2 AND 6 CHANGE	Y	Y	Y	Y	Y	R	R	R	R	DW	DW
PHASE 3	R	R	R	R	R	R	R	R	G	DW	DW
3 CHANGE	R	R	R	R	R	R	R	R	Y	Y	DW
PHASE 3 ALT	R	R	R	R	R	R	R	R	G	WK	WK
PED CLEARANCE	R	R	R	R	R	R	R	R	G	FL/DW	FL/DW
3 ALT CHANGE	R	R	R	R	R	R	R	R	Y	Y	DW
PHASE 4	R	R	R	R	R	G	G	R	R	DW	DW
4 CHANGE	R	R	R	R	R	Y	Y	R	R	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	DARK	DARK

SHA No: BW846M83
MD 103 @ MD 104/ South
Haven Drive
Howard County



STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

**MD 103 (MONTGOMERY ROAD) AND MD 104
(WATERLOO ROAD) SOUTH HAVEN DRIVE**
ELLICOTT CITY, MARYLAND

GENERAL INFORMATION PLAN

SCALE NONE DATE 3/06 CONTRACT NO.

DESIGNED BY S. SMITH COUNTY HOWARD
DRAWN BY D. BROWN LOGMILE 13010304.26
CHECKED BY S. RENZI TMS NO. F801
FAP NO. TOD NO.

TS NO. TS-1520F-2 DRAWING PSG OF N001 SHEET NO. 2 OF 2

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